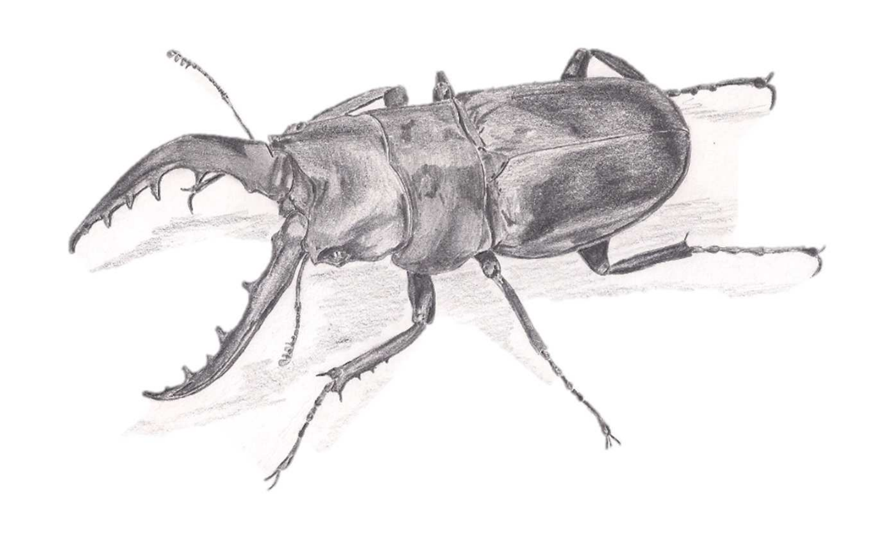
ISSN 2521-4012

臺灣研蟲誌

Taiwanese Journal of Entomological Studies



第二卷，第三期

臺灣昆蟲同好會

Taiwanese Society of Insect Natural History

Vo. 2, No. 3, September 25, 2017

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http://zoobank.org/urn:lsid:zoobank.org:pub:D4B28683-BDD9-46C9-8A71-C4CF18256E41

梭德凹翅麗菊虎終齡幼蟲之人工飼養條件記述 (鞘翅目：菊虎科)

胡芳碩

國立羅東高級中學 宜蘭縣羅東鎮中正路324號

摘要: 本研究記述野外採集之梭德凹翅麗菊虎 *Themus* (*Telephorops*) *sauteri* (Pic, 1912) 終齡幼蟲的人工飼養條件及觀察紀錄。

關鍵詞: 菊虎科、麗菊虎屬、終齡幼蟲、飼養紀錄

前言

目前臺灣已被描述的菊虎科 (Cantharidae) 麗菊虎屬 (*Themus* Motschulsky, 1857) 種類有 12 種，其中凹翅麗菊虎亞屬 (*Telephorops* Fairmaire, 1886) 則有 4 種 (Satô et al., 2014)。梭德凹翅麗菊虎成蟲體長約 18 mm，頭部、觸角及前胸背板為黃色，翅鞘藍黑色並帶金屬光澤，中央明顯凹陷，六足為黃色而跗節黑色。菊虎科的成蟲採集紀錄雖多，但幼蟲卻鮮少有採集及飼養成功的案例，除了澳洲學者 D. Shohet 和 A. R. Clarke 在 1997 年針對瘟疫麗艷菊虎 (*Chauliognathus lugubris* (Fabricius, 1801)) 的飼養報告 (Shohet & Clark, 1997)，僅有日人高田兼太和高橋直樹於 2013 年發表利用乾燥貓食來作為縫紋異菊虎 (*Lycocerus suturellus suturellus* (Motschulsky, 1860)) 野外採集之終齡幼蟲的替代餌料之紀錄 (Takada & Takahashi, 2013)，以及巴西學者 G. Biffi 和 S. A. Casari 於 2017 年發表針對新熱帶區產的麗艷菊虎亞科 (Chauliognathinae) 成員幼生期形態的比較形態學研究中附帶的飼養紀錄 (Biffi & Casari, 2017)。。

作者於 2017 年 5 月 20 日在宜蘭縣大同鄉海拔約 1750 m 處採集到一隻身份不明的菊虎科終齡幼蟲，並成功令其於人工飼育環境下羽化為成蟲，經形態鑑定後確認為梭德凹翅麗菊虎 (*Themus* (*Telephorops*) *sauteri* (Pic, 1912))，飼養紀錄記述如下。

材料與方法

本研究材料採集自宜蘭縣大同鄉海拔約 1750 m 處的乾溝中的石頭下方，採集時間為於 2017 年 5 月 20 日晚間，地點位處中海拔之霧林帶，林道一側為天然針闊葉混合林，另一側為由紅檜 (*Chamaecyparis formosensis* Matsum.) 及臺灣扁柏 (*Chamaecyparis obtusa* (Siebold & Zucc.) Endl. var. *formosana* (Hayata) Hayata) 組成的人工林，乾溝底部為潮濕的泥土，且遍布石頭，兩旁則多為芒屬 (*Miscanthus*) 的植物，當日僅發現該隻菊虎幼蟲，發現環境如圖一。

稿件收到 *Received: 05 August 2017*
稿件接受 *Accepted: 07 August 2017*
稿件出版 *Published: 25 September 2017*



圖一、梭德凹翅麗菊虎終齡幼蟲的棲息環境。

人工飼育條件參考 Shohet & Clarke (1997) 的飼養方法，並加以改良，以 140cc 之透明圓形塑膠杯 (直徑: 65 mm，深度 45 mm) 盛裝 3 cm 的鬆散木屑，並噴水保濕，於木屑上層以加水壓實為片狀的衛生紙覆蓋 (圖二)，供幼蟲躲藏，2 至 3 天噴水一次。餌料則改以櫻桃紅蟑 (*Blatta lateralis* Walker, 1868)，為防止餌料傷害菊虎幼蟲，而將櫻桃紅蟑剪碎後放置於木屑上方，餵食頻率為每 2 至 3 天一次一隻約 5 mm 大小的櫻桃紅蟑，每次會取出食物殘渣再將新的食物置入，食物多未取食完畢，剩約三分之一隻櫻桃紅蟑。飼養環境控制在 22˚C，僅餵食及噴水時拿到室溫中操作。飼養過程以 Canon Power Shot G16 數位相機拍攝。

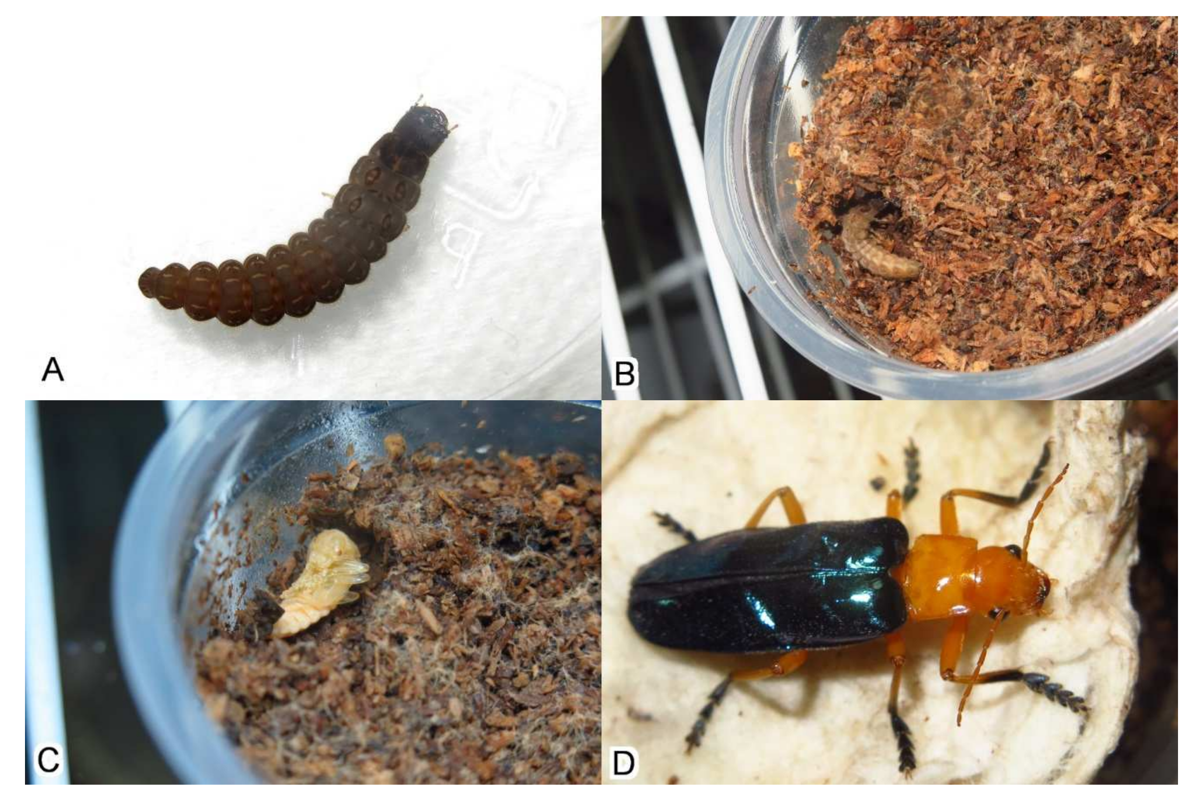


圖二、梭德凹翅麗菊虎終齡幼蟲的人工飼養環境。

結果

梭德凹翅麗菊虎
***Themus* (*Telephorops*) *sauteri* (Pic, 1912)**
(圖三)

飼養紀錄：2017 年 5 月 21 日將幼蟲置於前述的飼養環境中 (圖三A)，並每天晚上觀察其行為，發現多數時間幼蟲待在衛生紙及木屑的夾縫中，幼蟲期間至製作蛹室前僅兩度發現幼蟲鑽入木屑中，然而鑽入木屑隔天就發現又鑽回衛生紙及木屑的夾縫中。2017 年 7 月 13 日幼蟲於衛生紙及木屑的夾縫建造一圓形蛹室，蛹室直徑約 20 mm、深約 6 mm，幼蟲轉變為前蛹且失去移動能力 (圖三B)。 2017 年 7 月 21日發現已經化蛹 (圖三C)。2017 年 7 月 30 日羽化，體長約 17.5 mm，委請蕭昀先生進行形態種鑑定後確認為梭德凹翅麗菊虎 (*Themus* (*Telephorops*) *sauteri* (Pic, 1912)) (圖三D，羽化後隔兩日所拍攝)。



圖三、梭德凹翅麗菊虎 *Themus* (*Telephorops*) *sauteri* (Pic, 1912): A. 幼蟲背面觀；B. 前蛹；C. 蛹；D. 成蟲。

討論

鞘翅目 (Coleoptera) 昆蟲之幼生期的形態特徵被認為具有演化保守性，因此描述其幼蟲形態能夠協助提供進行系統發育分析時所選用的形態特徵，且菊虎幼蟲在野外普遍被認為是掠食者，有可能捕食農業害蟲，因此有潛力被拿來作為生物防治用途 (Yamazaki et al., 2003)，然而投入研究菊虎幼生期的學者並不多，尤其臺灣尚未有任何一種菊虎的幼生期被正式地描述過，也鮮少有採集、飼養紀錄，更尚未建立一套完整的飼養技術，因此未來若能建立一套穩定的飼養技術，對於菊虎的系統發育學、行為學、生態學，甚至用來作為生物防治的捕食者，都能提供更穩定的材料。

誌謝

本研究特別感謝蕭昀學長協助鑑定梭德凹翅麗菊虎並輔導文章寫作。

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Notes on Rearing Method for Last Instar Larva of *Themus* (*Telephorops*) *sauteri* (Pic, 1912) (Coleoptera: Cantharidae)

FANG-SHOU HU

National Luodong Senior High School, No.324, Zhongzheng Rd., Luodong Township 265, Taiwan. Email: allenhu1999925@gmail.com

Abstract. This paper provides the rearing method and observational notes on the last instar larva of the cantharid species *Themus* (*Telephorops*) *sauteri* (Pic, 1912) which collected from the field.

Key words: Cantharidae, *Themus*, last instar larva, rearing method

[研究文章 Research Article]

http://zoobank.org/urn:lsid:zoobank.org:pub:0DADBDA3-541F-45D2-8A76-4EC42C44A723

金門縣產新記錄種弦月嗡蜣螂短記 (鞘翅目：金龜子科：蜣螂亞科)

何彬宏

南臺科技大學生物科技系 71005 台南市永康區南台街 1 號

摘要: 弦月嗡蜣螂 *Onthophagus* (*Colobonthophagus*) *lunatus* Harold, 1868 首次於金門縣發現的分布記錄。

關鍵詞: 金龜子科、蜣螂亞科、新記錄、金門縣

前言

金門為鄰近中國福建省的大陸島，島上畜養許多臺灣黃牛，糞便資源穩定，惟島上的糞金龜物種研究相當缺乏，僅有 Chang (2011) 於其科普著作中提到兩個種類，並附影像記錄。Harold (1868) 基於採集自香港的標本發表了弦月嗡蜣螂 *Onthophagus* (*Colobonthophagus*) *lunatus*，而 Matsumura (1938) 記錄本種在臺灣地區及中國大陸的分布，卻從未檢視到來自臺灣的標本，雖然古北區鞘翅名錄亦記錄了本種於臺灣的分布 (Löbl et al., 2006; Ziani & Bezděk, 2016)，然而本種在臺灣的分布仍有待查證。

作者於檢視國立自然科學博物館的館藏及私人標本蒐藏記錄期間發現採集於金門並由連裕益先生鑑定為本種的標本，經過文獻及標本比對後再次確認為弦月嗡蜣螂並且為金門地區的全新紀錄，報導如下。

材料與方法

本研究所檢查之標本分別存放於國立自然科學博物館 (NMNS: National Museum of Natural Science, Taichung, Taiwan) 及作者私人收藏 (BHC: B.-H. Ho’s private collection, Taipei, Taiwan)。標本照片以 OLYMPUS PEN lite E-PL6 數位微單眼相機搭配 OLYMPUS M. ZUIKO DIGITAL ED 60mm F2.8 Macro 鏡頭拍攝。

結果

弦月嗡蜣螂
***Onthophagus* (*Colobonthophagus*) *lunatus* Harold, 1868**
(圖 1–4)

Onthophagus (*Colobonthophagus*) *lunatus* Harold, 1868
Onthophagus lamellatus Boucomont, 1924
Onthophagus laminatus Taschenberg, 1879
Onthophagus taschenbergi Gillet, 1925

標本檢查：2 ♂, 1 ♀, Kinmen Is., 5–8. IX. 1995, Y.-Y. Lien leg. / det. Y.-Y. Lien. (NMNS); 2 ♂, Mashan Obesrvation Post, Jinsha Township, Kinmen Co., Taiwan, 25. VI. 2016, (Cow dung), R.-H. Liou leg. (BHC); 1 ♂, Neiyang, Jinsha Township, Kinmen Co., Taiwan, 28. V. 2017, (Cow dung), P.-W. Chi leg. (BHC); 1 ♂, Xiasing, Kinmen Co., Taiwan, 30. VII. 2017, (Cow dung), C.-W. Kang leg. (BHC).

描述：體長 8–10 mm，體色黑色帶強烈光澤，觸角黃褐色，前足脛節有 4 個外緣齒，第 4 外緣齒最小。頭部寬大且外緣接近圓弧狀，唇基略平直。雄蟲頭部額隆線特化成明顯的板狀犄角，呈向兩側延伸的彎月狀；前胸背板頂部向前方延伸出一塊略呈長方形的板狀突起，前端中央處略凹。雌蟲額隆線長且略呈緩弧狀，頭頂部有一塊接近方形的凹陷部夾於兩複眼之間。

食性：涵蓋家牛、水牛及豬糞便。(Kabakov & Napolov, 1999)

分布：香港、中國大陸、海南島、緬甸北部、越南、臺灣 (金門，新記錄)。(Kabakov & Napolov, 1999; Kabakov & Shokhin, 2014; Matsumura, 1938)

稿件收到 *Received: 17 August 2017*
稿件接受 *Accepted: 20 August 2017*
稿件出版 *Published: 25 September 2017*



圖 1–4、弦月嗡蜣螂 *Onthophagus* (*Colobonthophagus*) *lunatus* Harold, 1868。1. 雌蟲背面觀。2. 雄蟲背面觀。3. 雄蟲頭部及前胸背板側面觀。4. 雄蟲頭部正面觀。

誌謝

本研究特別感謝國立自然科學博物館蔡經甫博士在作者前往檢視標本時所給予的協助。

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Notes on *Onthophagus* (*Colobonthophagus*) *lunatus* Harold, 1868 (Coleoptera: Scarabaeidae: Scarabaeinae), a New Record in Kinmen County, Taiwan

BIN-HONG HO

Department of Biotechnology, Southern Taiwan University of Science and Technology. No. 1, Nantai St., Yongkang Dist., Tainan, 71005 Taiwan. Email: lookforbiology@gmail.com

Abstract. This study firstly reported the occurrence of *Onthophagus* (*Colobonthophagus*) *lunatus* Harold, 1868 from Kinmen County, Taiwan.

Key words: Scarabaeidae, Scarabaeinae, new record, Kinmen County

臺灣研蟲誌 Taiwanese Journal of Entomological Studies 2(3): 8-12 (2017)

[研究文章 Research Article]

http://zoobank.org/urn:lsid:zoobank.org:pub:710ABB26-AC20-4866-9481-65DF8E00964D

New Distributional Records of *Pseudendestes andrewesi* (Grouvelle, 1908) (Coleoptera: Zopheridae) from Taiwan

SHU MAKITA

Department of Mathematics, Hokkaido University, Kita 10, Nishi 8, Kita-Ku, Sapporo, Hokkaido, 060-0810, Japan. Email: cybister1014@eis.hokudai.ac.jp

Abstract. *Pseudendestes andrewesi* (Grouvelle, 1908) is newly recorded from Taiwan, and figured and diagnosed.

Key words: Zopheridae, *Pseudendestes*, new faunistic record, Taiwan

Introdution

The genus *Pseudendestes* contains 5 species (*P. robertsi*, *P. australis*, *P. lawrencei*, *P. andrewesi*, *P. namdaphaensis*) in the world (Aoki et al., 2008). Among these species, *Pseudendestes andrewesi* (Grouvelle, 1908) has been recorded from Japan (Ishigaki-jima Island) and India (Aoki, 2012) but not from region between India and Japan. Recently, I've examined zopherid specimens at Taiwan Agricultural Research Institute (TARI) and found two specimens of *Pseudendestes andrewesi* collected in Taiwan, which is previously unknown from Taiwan. New records of the species from Taiwan are provided as below.

Material and methods

The materials examined in this paper are deposited at Taiwan Agricultural Research Institute, Wufeng, Taichung, Taiwan (TARI, Dr. Chi-Feng Lee). The species was identified as *P. andrewesi* (Grouvelle, 1908) based on Aoki et al. (2008). Measurements were taken as follows and expressed as ratios in the measurements: body width (BW, the greatest body width); body length (BL, the length from the anteromedian edge of the pronotum to apex of elytra); pronotal width (PW, the greatest pronotal width); pronotal length (PL, the median length of the pronotum); elytral width (EW, the greatest width of the combined elytra); elytral length (EL, the length along the suture including the scutellar shield).

Results

Pseudendestes andrewesi (Grouvelle, 1908)

(Figs. 1–3)

Endestes andrewesi Grouvelle, 1908: 414, pl. 9, fig. 5.
Pseudendestes andrewesi: Lawrence, 1980: 299; Aoki et al., 2008: 1, fig. 1; Aoki, 2009: 118, fig (p. 119).

Material examined. 1 ex., Lanyu, Taitung, Taiwan, 27. VII. 2015, Y.-T. Wang leg.; 1 ex., Kuraru [=Kueitzuchiao, Kenting National Park, Hengchun Township, Pingtung County], Taiwan, 25. VIII. 1932, Y. Miwa leg.

Measurements. Specimen from Lanyu Island (n = 1): BL = 4.8 mm; BW = 1.0 mm; PL = 1.4 mm; PW = 1.0; EL = 3.4 mm; EW = 1.0 mm; PL/PW = 1.4 mm; EL/EW = 3.4.
Specimen from Pintung (n = 1): BL = 4.7 mm; BW = 1.0 mm; PL = 1.4 mm; PW = 0.9 mm; EL = 3.3 mm; EW = 1.0 mm; PL/PW = 1.56; EL/EW = 3.3.

Diagnosis. *Pseudendestes andrewesi* (Grouvelle, 1908) can be distinguishable from other species by the combination of following characters: slender body; antennae with 3 segmented club; elytra with 3 ridge line (Aoki et al., 2008).

稿件收到 *Received: 27 August 2017*
稿件接受 *Accepted: 28 August 2017*
稿件出版 *Published: 25 September 2017*

Distribution. Japan (Ishihgaki-jima Island); India; Taiwan (new record).



Figure 1. The habitus of *Pseudendestes andrewesi* (Grouvelle) from Taiwan, showing slender body. Scale: 1.0 mm.



Figure 2. Dorsal view of antennae with 3 segmented club. Scale: 0.1 mm.

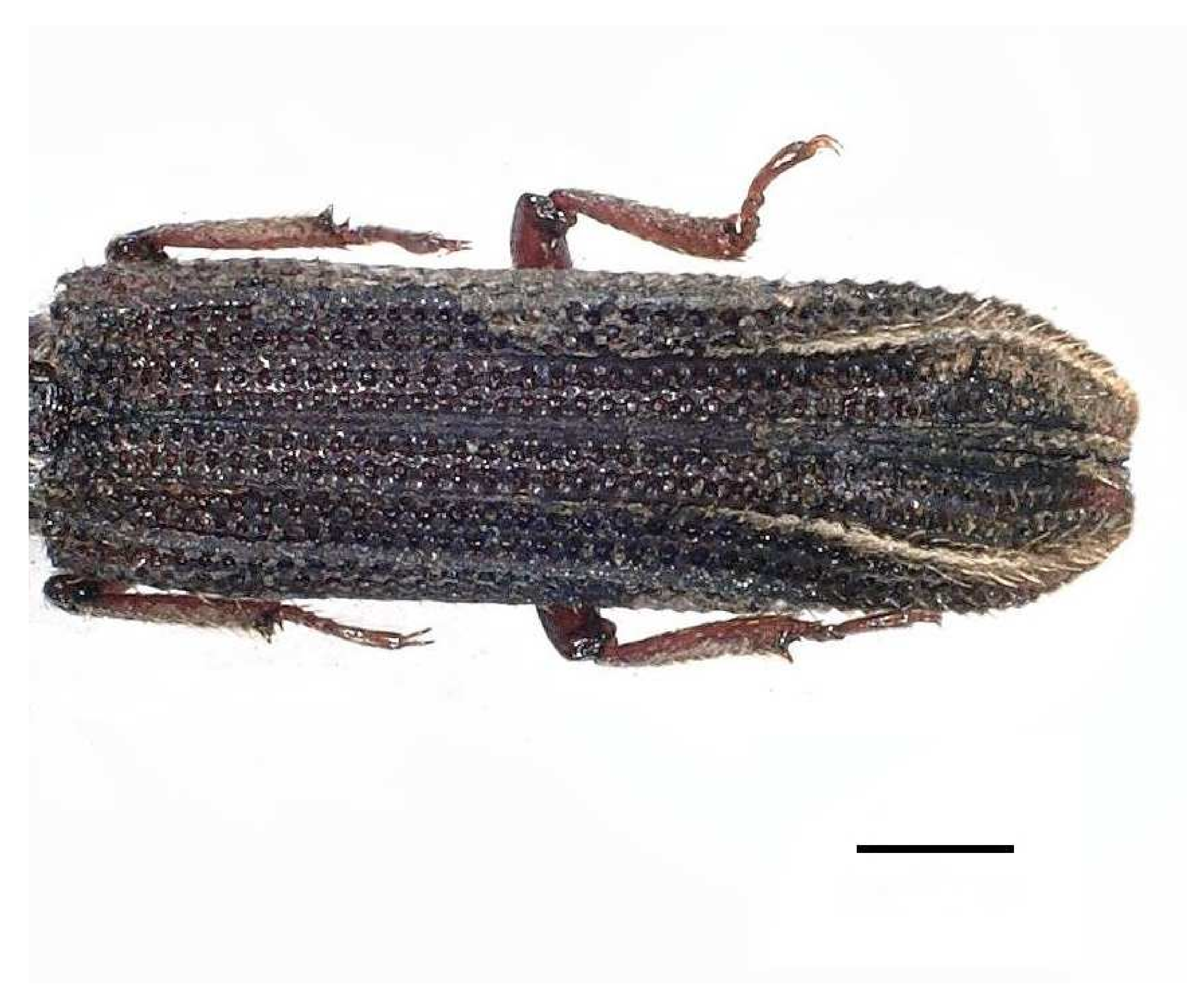


Figure 3. Dorsal view of elytra, showing elytra with 3 ridge line. Scale: 0.5 mm.

Acknowledgment

I express my deep gratitude to Dr. Chi-Feng Lee for kind help at TARI.

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臺灣新紀錄種安氏偽長細堅蟲之記述（鞘翅目：瘤擬步行蟲科）

牧田習

北海道大學理學部 060-0810 日本北海道札幌市北區北10條西8丁目

摘要: 安氏偽長細堅蟲 *Pseudendestes andrewesi* (Grouvelle, 1908) 首次發現於臺灣，本文同時提供標本細節照片及其診斷性差異。

關鍵詞: 瘤擬步行蟲科、偽長細堅蟲屬、物種相新紀錄、臺灣

臺灣研蟲誌 Taiwanese Journal of Entomological Studies 2(3): 13-16 (2017)

[研究文章 Research Article]

http://zoobank.org/urn:lsid:zoobank.org:pub:48AEE3BD-451D-41E6-A10E-7E5306F18553

Necrophila (*Chrysosilpha*) *formosa* (Laporte, 1852): a New Record for East Timor (Coleoptera: Silphidae)

RAUL NASCIMENTO FERREIRA

6 Fairview Dr., Pawcatuck, CT 06379-1223 USA. Email: insectcatcher@comcast.net

Abstract. *Necrophila* (*Chrysosilpha*) *formosa* (Laporte, 1852) is reported from East Timor for the first time. Some ecological notes are provided.
Key words: Coleoptera, Silphinae, first record, ecology, Democratic Republic of Timor-Leste

Resumo. A especie *Necrophila* (*Chrysosilpha*) *formosa* (Laporte, 1852) é mencionada pela primeira vez para East Timor ao mesmo tempo que damos algumas notas ecológicas a seu respeito.
Palabras chave: Coleoptera, Silphinae, primeira citação, ecologia, República Democrática de Timor-Leste

Introduction

East Timor is the eastern part of the Timor island belonging to the Indonesian archipelago, which is located between the Indian Ocean and the South China Sea (Fig. 1). East Timor includes the enclave of Oécusse located in West Timor and the nearby islands of Ataúro and Jaco with an area of 5,400 square miles (15,410 km.). East Timor's closest neighbor, other than Indonesia is Australia at 400 miles to the South.

Recently Peck (2001) and Sikes (2008) listed *Deutosilpha* Portevin, 1920, *Calosilpha* Portevin, 1921, *Chrysosilpha* Portevin, 1920 and *Eusilpha* Semenov, 1890 as subgenera of the genus *Necrophila* Kirby & Spence, 1828. Rūžička et al.'s (2011, 2012, 2015) publications on the revision of the Palearctic and Oriental *Necrophila* Kirby & Spence, 1828 triggered my memory to look into my collection, of East Timor, resulting in the discovery of the specimen of this note, which is confirmed as *Necrophila* (*Chrysosilpha*) *formosa* (Laporte, 1852) after morphological examination. New record of *Necrophila* (*Chrysosilpha*) *formosa* from East Timor are provided as below.

Material and methods

During my two years of military service, I was stationed in Timor, now Democratic Republic of Timor-Leste, a former Portuguese Territory, were I collected an abundant amount of entomological material (about 5,000 specimens) that I offered, during my last two years, as a student, to the University of Science and Technology of Coimbra, Portugal. Among that material deposited at the Zoological Museum of the University of Science Technology of Coimbra I kept the majority of the Staphyliniformia specimens. In the material that I kept. I found one specimen of the subfamily Silphinae that is the object of this note.

The material examined in this paper is deposited at Raul Nascimento Ferreira Collection, Pawcatuck, USA (RNFC). The species was identified as *Necrophila* (*Chrysosilpha*) *formosa* (Laporte, 1852) based on Rūžička & Schneider (2011) and Rūžička et al. (2012, 2015).

Results

***Necrophila* (*Chrysosilpha*) *formosa* (Laporte, 1852)**
(Fig. 3)

Material examined. 1 ex., Maubisse, Ainaro, East Timor, 8. V. 1965, R.N. Ferreira leg. (RNFC) (Fig.3).

Redescription. Body length 12.0–17.0 mm. Head blackish brown, surface distinctly punctated, without lustre. Pronotum orange, with 4 spots arranged in a trapezoidal position medially on the disc; anterior pair small, rounded; posterior large, oval, slightly

稿件收到 *Received: 05 September 2017*
稿件接受 *Accepted: 06 September 2017*
稿件出版 *Published: 25 September 2017*

oblique. Elytra metallic green, with some bluish lustre. Apex of male elytra regularly rounded while slightly elongate in females (Růžička et al., 2012).

Remarks. *Necrophila* (*Chrysosilpha*) *formosa* (Laporte, 1852) was originally described as *Silpha formosa* (Laporte, 1852). Portevin, (1921) erected a new genus *Chrysosilpha* Portevin, 1921 to accommodate *C. formosa* and another four species, then *Chrysosilpha* was treated as subgenus of the genus *Necrophila* Kirby & Spence, 1828 in Peck (2001) and Sikes (2008), and Růžička et al. (2012) officially proposed the new combination of *Necrophila* (*Chrysosilpha*) *formosa* (for further information on taxonomic history of these taxa see (Růžička et al., 2012)).

Ecological notes. Maubisse is located in the Ainaro District (Fig. 2) situated in the middle of the two coasts at an elevation of 1432 meters between the Bolibó, Edi, Aituti and Fato-Babi Mountains at latitude 8˚ 50" south and longitude 125˚ 36" east. It is a region of poor vegetation. The specimen was collected between some remains of blood and cow guts close to the slaughter house at the Military Base. The seasonal activity and ecological observations of Růžička et al. (2012) concurs with the data of my specimen.

Distribution. Laos, Vietnam, Thailand, Malaysia, Indonesia and now East Timor (new record). With this new record for East Timor the distributional area of the species is extended to south of its original area (Bali).



Figure 1. Location of East Timor. Available from: http//:en.wikipedia.org/wiki/East_Timor).



Figure 2. Location of Maubisse, Ainaro District. Available from: http//:en.wikipedia.org/wiki/Ainaro_District).



Figure 3. Habitus of *Necrophila* (*Chrysosilpha*) *formosa* (Laporte, 1852) from East Timor.

Acknowledgment

I would like to thank my son José E. Ferreira, Dr. Jane O'Donnell (University of Connecticut, Storrs) and Dr. Derek S. Sikes (University of Alaska Museum, Fairbanks) for kindly reviewing the manuscript and offering critical comments and suggestions for its improvement.

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東帝汶新紀錄種四斑紅胸埋葬蟲之記述（鞘翅目：埋葬蟲科）

勞爾・納西門托・費雷拉

06379-1223 美國康乃狄克州新倫敦郡波卡塔克村費爾維尤六路

摘要: 四斑紅胸埋葬蟲 *Necrophila* (*Chrysosilpha*) *formosa* (Laporte, 1852) 首次記錄於東帝汶，本文同時提供其生態學資訊。

關鍵詞: 鞘翅目、埋葬蟲亞科、新紀錄種、生態學、東帝汶民主共和國

臺灣研蟲誌 Taiwanese Journal of Entomological Studies 2(3): 17-21 (2017)

[研究文章 Research Article]

http://zoobank.org/urn:lsid:zoobank.org:pub:42D8BF15-AD79-409E-9656-E4BB75C1D797

臺大實驗林植綏蟎相初探 (蜱蟎亞綱：中氣門目)：I. 鳳凰自然教育園區

李曉芹、廖治榮

國立臺灣大學昆蟲學系 10617 臺北市羅斯福路四段 113 巷 27 號

摘要: 本研究為鳳凰自然教育園區植綏蟎相初探，於 8 種植物上調查到了 4 屬 6 種，共 37 隻植綏蟎個體。

關鍵詞: 植綏蟎、生物資源調查、鳳凰自然教育園區

前言

植綏蟎科 (捕植蟎) 部分種類能捕食田間植食性的小型害蟲，如葉蟎、節蜱、粉蝨、蚜蟲及薊馬等，常作為生物防治之捕食性天敵，對農業生態系提供重要的貢獻 (Moraes et al., 2004; McMurtry et al., 2013)。全世界已記錄超過 90 屬 2,700 種 (Moraes et al., 2004; Chant & McMurtry, 2007; Demite et al., 2017)。由於植綏蟎的生物防治潛力逐漸受到重視，為能使其更有效的應用，基礎分類學的研究是不可或缺的。然目前臺灣地區植綏蟎調查多侷限於農地或郊區，而森林生態系中的植綏蟎相仍有許多值得探討的地方。

國立臺灣大學生物資源暨農學院實驗林管理處位於南投縣，地跨鹿谷、水里、信義三鄉。海拔高低落差約 3,700 公尺，地形錯綜複雜，豐富多樣的生物資源，具備了亞熱帶、暖溫帶、涼溫帶、冷溫帶及亞寒帶之各種森林植物帶，為臺灣森林垂直分佈之縮影。鳳凰自然教育園區係屬國立臺灣大學生物資源暨農學院實驗林管理處，位於南投縣鹿谷鄉鳳凰村南側，東臨鳳凰谷鳥園，南倚鳳凰山脈盡端山麓，西、北俯視鳳凰村、永隆村台地、凍頂山及濁水溪流域城鄉區域，屬暖溫帶氣候，動、植物資源豐富，中海拔自然生態教育園區，可供為全國各級學校、社團作為推廣自然生態教育及全體國民休閒觀光旅遊絕佳場所。本系列研究預期調查實驗林轄區之各自然教育園區，藉此以了解臺灣森林生態系中的植綏蟎相。

材料與方法

採集、玻片製作和標本檢查方法同 Lee & Liao (2017)；樣本必要時使用伯氏漏斗分離。玻片標本利用光學顯微鏡 (Olympus BX51) 鏡檢，依循 Chant & McMurtry (2007) 之分類系統鑑定。檢查之標本存放於國立臺灣大學昆蟲學系 (National Taiwan University, Taipei, Taiwan)。

結果

本研究針對鳳凰自然教育園區進行植綏蟎相調查 (圖一)，於 8 種植物上調查共發現 4 屬 6 種，合計 37 隻植綏蟎個體。調查植物如下：野牡丹 (*Melastoma septemnervium*)、黃花風鈴木 (*Tabebuia chrysantha*)、白匏子 (*Mallotus paniculatus*)、葛藤 (*Pueraria lobata*)、山櫻花 (*Prunus campanulata*)、土肉桂 (*Cinnamomum osmophloeum*)、檸檬 (*Citrus limon*)、鵝掌藤 (*Schefflera arboricola*)。

稿件收到 *Received: 29 August 2017*
稿件接受 *Accepted: 11 September 2017*
稿件出版 *Published: 25 September 2017*



圖一、於鳳凰自然教育園區進行植綏蟎相調查。

6 種植綏蟎如下列：

植物綏蟎科 Phytoseiidae Berlese
鈍綏蟎亞科 Amblyseiinae Muma
鈍綏蟎屬 *Amblyseius* Berlese

江原鈍綏蟎
***Amblyseius eharai* Amitai & Swirski, 1981**

Amblyseius eharai Amitai & Swirski, 1981: 60.
Amblyseius (*Amblyseius*) *eharai*.—Wu et al., 2009: 210.

標本檢查：Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 5♀1♂ from *Melastoma septemnervium* (Melastomataceae), 6.vii.2017, J. R. Liao; Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 5♀4n from *Tabebuia chrysantha* (Bignoniaceae), 6.vii.2017, J. R. Liao; Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 2♀from *Mallotus paniculatus* (Euphorbiaceae), 6.vii.2017, J. R. Liao.

長尾鈍綏蟎
***Amblyseius herbicolus* (Chant, 1959)**

Typhlodromus (*Amblyseius*) *herbicolus* Chant, 1959: 84.
Amblyseius (*Amblyseius*) *herbicolus*.—Muma, 1961: 287.

標本檢查：Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 1♀ from *Tabebuia chrysantha* (Bignoniaceae), 6.vii.2017, J. R. Liao; Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 1♀ from *Pueraria lobata* (Fabaceae), 6.vii.2017, J. R. Liao; Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 1♂ from *Prunus campanulata* (Rosaceae), 6.vii.2017, J. R. Liao; Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 2♂ from *Cinnamomoum osmophloeum* (Lauraceae), 6.vii.2017, J. R. Liao.

真綏蟎屬 *Euseius* Berlese

愛澤真綏蟎
***Euseius aizawai* (Ehara & Bhandhufalck, 1977)**

Amblyseius (*Amblyseius*) *aizawai* Ehara & Bhandhufalck, 1977: 59.
Amblyseius aizawai.—Liang & Ke, 1983: 163.
Amblyseius (*Euseius*) *aizawai*.—Ehara, 2002: 36.
Euseius aizawai.—Moraes et al. 1986: 36.

標本檢查：Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 1♀ from *Cinnamomoum osmophloeum* (Lauraceae), 6.vii.2017, J. R. Liao.

分布：中國、馬來西亞、臺灣、泰國。

卵圓真綏蟎
***Euseius ovalis* (Evans, 1953)**

Typhlodromus ovalis Evans, 1953: 485.
Typhlodromus (*Amblyseius*) *ovalis*.—Chant, 1959: 68.
Amblyseius (*Typhlodromalus*) *ovalis*.—Muma, 1961: 288.
Amblyseius (*Amblyseius*) *ovalis*.—Ehara, 1966: 24.
Amblyseius (*Euseius*) *ovalis*.—Ehara & Amano, 1998: 43.
Euseius ovalis.—Gupta, 1978: 335; Liao et al., 2017: 220.

標本檢查：Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 1♀ from *Tabebuia chrysantha* (Bignoniaceae), 6.vii.2017, J. R. Liao; Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 3♀ from *Citrus limon* (Rutaceae), 6.vii.2017, J. R. Liao.

分布：澳洲、中國、斐濟、夏威夷、香港、印度、印尼、日本、模里西斯、墨西哥、紐西蘭、巴布新幾內亞、菲律賓、臺灣。

沖綏蟎屬 *Okiseius* Ehara

亞熱沖綏蟎
***Okiseius subtropicus* Ehara, 1967**

Okiseius subtropicus Ehara, 1967: 77.

標本檢查：Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 1♀ from *Mallotus paniculatus* (Euphorbiaceae), 6.vii.2017, J. R. Liao; Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 1♀ from *Schefflera arboricola* (Araliaceae), 6.vii.2017, J. R. Liao.

分布：中國、日本、菲律賓、臺灣。

擬植綏蟎屬 *Paraphytoseius* Swirski & Shechter

纖細擬植綏蟎
***Paraphytoseius cracentis* (Corpuz & Rimando, 1966)**

Ptenoseius cracentis Corpuz & Rimando, 1966: 115.
Paraphytoseius cracentis.—Swirski & Golan, 1967: 226.

標 本 檢 查 ： Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 1♀from *Mallotus paniculatus* (Euphorbiaceae), 6.vii.2017, J. R. Liao; Fenghuang Nature Education Area (23°43.704' N, 120°47.281' E, 871 m), 5♀2♂from *Pueraria lobata* (Fabaceae), 6.vii.2017, J. R. Liao.

分布：中國、香港、巴布新幾內亞、菲律賓、新加坡、臺灣、泰國。

誌謝

感謝葉信廷博士協助調查，本研究承科技部計畫編號 MOST105-2621-B-002-002-MY3 經費補助，謹此致謝。

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臺灣研蟲誌 Taiwanese Journal of Entomological Studies 2(3): 17-21 (2017)

The Preliminary Faunistic Survey of Phytoseiid Mites (Acari: Mesostigmata) from the Experimental Forest of National Taiwan University. I. Fenghuang Nature Education Area

HSIAO-CHIN LEE[1], JIHH-RONG LIAO[2]

Department of Entomology, National Taiwan University, No.27, Lane 113, Sec. 4, Roosevelt Rd., Taipei 106, Taiwan.
Email: R05632002@ntu.edu.tw[1]; D04632007@ntu.edu.tw[2]

Abstract. The present paper provides a preliminary faunistic survey of phytoseiid mites from Fenghuang Nature Education Area in Nantou County, Taiwan. It comprised 37 specimens, 6 species in 4 genera on 8 different habitat plants.

Key words: Phytoseiids, faunistic survey, Fenghuang Nature Education Area

臺 灣 研 蟲 誌

Taiwanese Journal of Entomological Studies

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蕭 昀 (Yun HSIAO)
發行單位 (Publisher)：臺 灣 昆 蟲 同 好 會
地址 (Address)：高 雄 市 大 樹 區 中 山 路 172 號
網站 (Website)：http://taisocinh.wixsite.com/taisocinsectnhweb
出版年月 (Date of publication)：西 元 2017 年 9 月 25 日
創刊年月 (First date of publication)：西 元 2016 年 12 月 25 日
刊期頻率 (Frequency)：季刊

臺 灣 昆 蟲 同 好 會

Taiwanese Society of Insect Natural History

本會為臺灣昆蟲(含蛛形)愛好者所組成，廣納研究同好為會友，以定期與不定期方式舉辦各種研討聚會、發行昆蟲(含蛛形)自然史相關觀察研究期刊，凝聚全臺愛好者，以促進我國昆蟲、蛛形自然史之發展。

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來稿請寄送：taisocinh@gmail.com